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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/867,606	05/31/2001	tb Johansen	0459-0611P	7054

30593 7590 10/22/2003

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EXAMINER
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NGUYEN, TUAN DUC

ART UNIT	PAPER NUMBER
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2643

DATE MAILED: 10/22/2003

12

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/867,606

Applicant(s)

JOHANSEN ET AL.

Examiner

Tuan D. Nguyen

Art Unit

2643

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on 02 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-41 is/are pending in the application.
- 4a) Of the above claim(s) 1-22 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 23-41 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_. 6) ☐ Other: \_\_\_\_\_

***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 23-41 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. patent number 5,870,482 (Loeppert et al)

Regarding claims 23, and 30-36, Loeppert et al discloses a condenser microphone comprising a diaphragm (column 3 lines 45-46 item 12) and a back-plate (column 4 lines 20-21 item 14b, wherein an inner surface of said diaphragm forms a capacitor (column 4 line 20) in combination with an inner surface of said back-plate, said back-plate and/or said diaphragm is/are provided with a number of openings (column 9 line 32-33 item 72), and wherein the static distance between said diaphragm and said back-plate is smaller than 10 micron m (column 6 lines 1-25)

Loeppert et al does not disclose said inner surfaces being provided with a hydrophobic layer.

However, the hydrophobic layer is well known.

Therefore, it would have been obvious to a one of ordinary skill in the art at the time of the invention was made to use the well known hydrophobic material in Loeppert et al for preventing moisture.

Regarding claims 25-29, Loeppert et al also teaches the smallest dimension of each of the openings (column 9 lines 27-58).

Regarding claim 24, Loeppert et al does not disclose wherein at least the inner surfaces of the diaphragm and the back-plate are made from a hydrophilic material.

However, the hydrophilic material is well known for absorbing water.

Therefore, it would have been obvious to a one of ordinary skill in the art at the time of the invention was made to use the well known hydrophilic material in Loeppert et al for the underwater application.

Regarding, claims 37-38, Loeppert et al does not disclose the hydrophobic layer has a contact angle for water.

However, Loeppert et al does not restrict to any contact angle for water.

Therefore, it would have been obvious to a one of ordinary skill in the art at the time of the invention was made to change the contact angle for water for preventing moisture.

Regarding claims 39-41, Loeppert et al does not disclose a temperature range for the hydrophobic layer.

However, Loeppert et al does not restrict to any temperature. Moreover, the operating temperature range for the condenser microphone is well known.

Therefore, it would have been obvious to a one of ordinary skill in the art at the time of the invention was made to use the temperature range for operating the condenser microphone.

### ***Conclusion***


3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tuan D. Nguyen whose telephone number is (703) 305-7168. The examiner can normally be reached on M-F 8:15-4:45.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Curt Kuntz can be reached on (703) 305-4708. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9314 for regular communications and (703) 872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

TDN

10/1/03

  
CURTIS KUNTZ  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600